

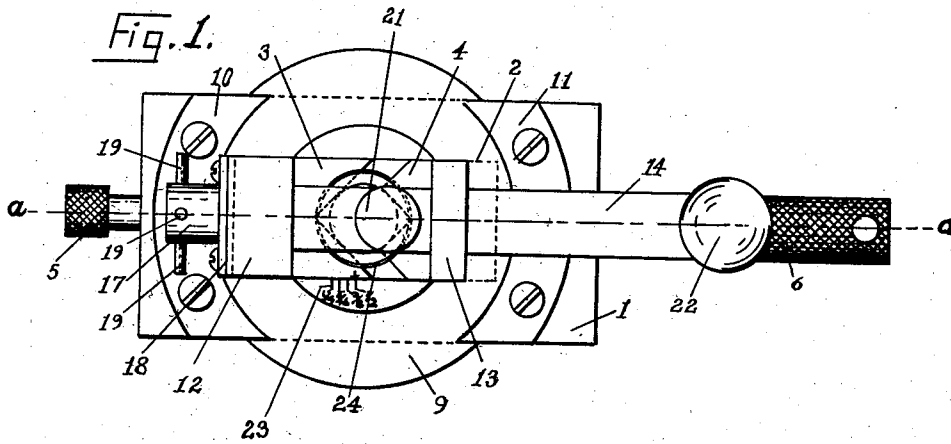
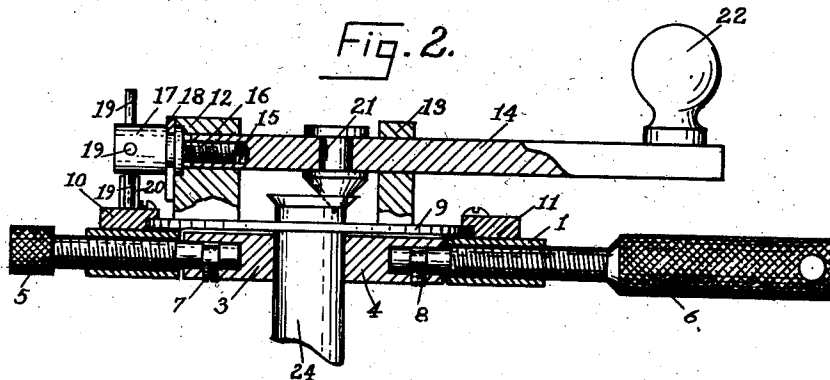
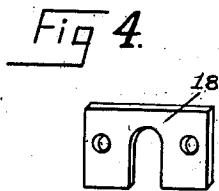
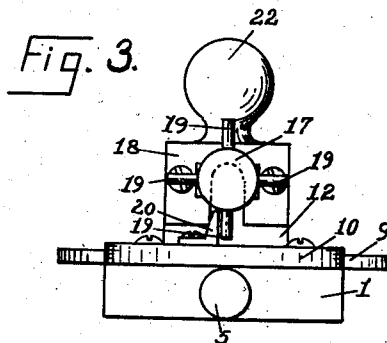
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E. R. CAPEWELL

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TUBE FLARING TOOL

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Inventor

Eugene R. Capewell

by Fred B. Seiberger
Atty

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TUBE FLARING TOOL

Eugene R. Capewell, Moorestown, N. J.

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1 Claim. (Cl. 153—81)

This invention relates to flaring tools which are commonly employed for flaring tubes to be used with compression fittings in refrigerating and other systems.

The object of this invention is to provide a flaring tool that can be readily adapted to hold varying tube sizes, and to enable flaring the end of a tube by gradually distending the metal to the desired size and preventing sharp demarcation or scoring of the side of the tube at the starting point of the flare.

Another object of the invention is to produce a uniform flare such as would be produced by spinning a tube in a lathe.

A further object of the invention is to provide a means whereby the flaring operation is under constant observation and may be controlled to suit specific requirements, these and other objects and advantages will be apparent from the disclosure as herein exemplified.

In the accompanying drawing,

Figure 1 is a plan view of the invention, and

Fig. 2 is a side elevation, partly in section, taken on line *a—a* in Figure 1, and

Fig. 3 is an end elevation of the device showing the flare controlling means, and

Fig. 4 a part of the control means.

Reference characters indicate the same parts in the several drawings.

In the practice of the invention, as shown in Figure 1 the body portion 1 is provided with a rectangular opening 2. Clamping or chuck jaws 3 and 4 are disposed in the body opening 2 (see Fig. 2) and are adjustably held in operative position by knurled screw members 5 and 6, said screw members being axially disposed in the body member 1. The jaw members 3 and 4 are slidably disposed and held secure against thrust movement upon the screw members 5 and 6 by means of headless set screws 7 and 8 disposed in the respective jaw members and entering into suitable grooves in the screw members 5 and 6.

The gripping surfaces of the jaws are identical to those used in the conventional tap holders well known in the arts but may be serrated and overlapping in the same manner as those used in standard pipe vises.

A disk member 9 is concentrically disposed on the body portion 1, and is rotatably held thereto

by members 10 and 11 said members 10 and 11 being rigidly secured to the body member 1. Lug members 12 and 13 are vertically disposed on the disk member 9 and have a rectangular horizontal opening broached therethrough for receiving a slidable bar member 14. A threaded opening 15 in the bar 14 has a screw 16 disposed therein. The screw 16 has a slotted or grooved head portion 17 a part of which is disposed in the lug member 12 and is rotatably held therein by a horse shoe shaped member 18, said member 18 being rigidly secured to the lug member 12.

The outer end of the screw head 17 has four radially projecting lug members 19 to provide a star wheel, the said lug members, when striking a projecting pin member 20 which is rigidly secured to the lug member 12, give the screw 16 a partial turn. A rotatable cone shaped tube flaring member 21 is disposed in the slide bar member 14, and a handle 22 for rotating the disk and slide bar assembly is disposed at the outer end of the bar member 14.

To operate the device the jaw member 3 is set to the desired size indicated by the numerals 23 as shown in Figure 1, and the opposite jaw 4 is forced forward against the tube by turning the knurled screw 6 which places the tube 24 in concentric position under the disk 9. Rotating the disk assembly by means of the handle 22 causes the star wheel screw head 17 to pass the projecting pin 20 and move the slide bar 14 carrying the flaring cone 21 a fraction of an inch outward thereby increasing the orbit of the flaring cone concentrically and fractionally increasing the tube flare at each revolution of the assembly to the desired degree.

What is claimed as the invention and desired to be secured by Letters Patent, is:

A tube flaring device comprising, a body portion, movable jaws for holding a tube mounted thereon, a rotatable disk mounted on the body adjacent the jaws, a slide mounted on the rotatable disk, a rotatable flaring cone mounted on the slide, means for automatic intermittent movement of the slide during rotation of the disk, and means for adjusting the jaws in axial relation to the rotatable disk.

EUGENE R. CAPEWELL.